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**Commissioner Stephen G. Burns**  
**IAEA International Symposium on Communicating**  
**Nuclear and Radiological Emergencies to the Public**  
**“Planning is Everything”**  
**October 1, 2018**

Good morning! Thank you for that nice introduction. It is my pleasure to be here today to continue my long association with IAEA and to kick off the IAEA’s first symposium on communications in times of emergency. I am always pleased when people around the world take the time to come together to talk and exchange ideas, and perhaps commiserate about the problems we need to work through.

I have been a strong proponent of international exchange not only as Chairman and Commissioner at the NRC, but also when I was a career staffer at the agency and during my tenure at the Nuclear Energy Agency. While my focus was often legal in nature given my position and educational background, I have also frequently opined about communication -- both the challenges of and the need for effective communication. I understand there was named or soon will be named a youth competition awardee, associated with this fine symposium. I’d like to congratulate the winners for their application of the latest technology combined with their unique insights to create best practices in communication. I commend the IAEA for seeking youthful ideas to help solve problems their elders face. We need more of that!

This symposium is critically important and incredibly timely. As communication speeds up – more the speed of light than the speed of sound, it seems – and as it becomes much more international in scope, we all must take notice. I believe we must take the time to do the right planning and to hire the right people, and to be mindful of the trust our stakeholders seek in us as nuclear regulators. They want to trust us to do the right thing – and the right thing means communicating accurate, timely information in a language, in verbiage, they can understand. But more on that in a minute.

When I joined the U.S. Nuclear Regulatory Commission in 1978 as a young – certainly less gray–attorney, I had less than a year to get acclimated before the most serious nuclear plant failure occurred in the U.S. – Three Mile Island, in Pennsylvania, a little more than a hundred miles (160 kilometers) from Washington DC. While I did not have direct involvement in the response, that accident certainly altered the trajectory of what would turn out to be my workplace for more than 30 years. Seven years later the world became aware of the accident at Chernobyl in Ukraine. Information came slowly while global alarm grew. What is especially notable about these two incidents from a communication perspective was the pace of the information flow. At Three Mile Island, reporters responded eagerly to scheduled press conferences and filed stories for the evening news or the next

day's paper. Chernobyl was an international crisis communication scenario with very little information being released at all, and governments and journalists alike scrambled for bits of information to disseminate in a manner similar to TMI – mostly on half-hour evening news programs or to readers who had newspapers delivered to their front doors.

Communication channels had certainly changed by the time planes flew into the World Trade Center in New York in September 2001. While it was not a nuclear crisis, the subsequent fear of a terrorist attack on vital infrastructure – including nuclear power plants – ignited both the public and the regulators at the NRC. During 9/11, news was on a 24/7 cycle. Reporters stood in the streets and narrated live as events unfolded. And we all listened and watched in real time. We had definitely entered a more modern age of crisis communication. But, the Internet was still somewhat limited and slow – and many web sites struggled with the staggering amount of traffic that day, including the U.S. Federal Emergency Management Agency's web site. Other platforms had not yet been created or were still in their infancy as mass communication tools.

And then, there was the nuclear incident at the Fukushima Dai-ichi site in Japan in March 2011. As the NRC's General Counsel, I could see the vast global impact of the crisis, the full expression of the axiom stated by Dr. Hans Blix at the time of the Chernobyl accident. – “an accident anywhere is an accident everywhere.” Yet, Fukushima was not TMI or Chernobyl or even 9/11. Now there was Facebook and Twitter, fast Internet, YouTube, streaming video, ubiquitous cell phones, false speculation and rumors traveling around the globe at lightning speed. Country borders and language differences did not impede the flow.

Welcome to crisis communication in the age of Twitter. The communication game has fundamentally changed for all communicators, in all industries, all over the world. The speed of communication today guarantees that we will be playing catch-up from the onset of any crisis that affects us, our industry or our stakeholders. We must meet this challenge by anticipating, planning, developing messaging, and creating tools that anticipate our need to respond and to direct stakeholders to our credible information. We must have developed relationships within our organizations to get information approved quickly. We must develop relationships with media and through our social media platforms ahead of time – we can't do it in the midst of a global catastrophe – to bring the public and stakeholders to us, to see us as the source of credible information.

Perhaps you think I'm overstating this. Has the world really changed that much? Let me give you a chilling example of crisis communication today. It's not a nuclear incident, but it's relevant. On July 6, 2013, at 11:27 in the morning, Asiana Airlines Flight 214 crash landed at San Francisco International Airport. The first photo of the crash, taken by a passenger boarding another flight, hit Twitter at 11:28. That is one minute later. Some timelines say it was actually 30 seconds. The emergency slides of Flight 214 were deployed at 11:30 a.m. So, according to accepted timelines for those who have analyzed the communication scenario of that day, the first tweet was around the world BEFORE the first passenger had slid to safety on the tarmac. The first photo from a passenger on the Asiana flight was posted to Facebook and Twitter 15 minutes later. And not 10 minutes after that, journalists were contacting the passenger for interviews.

So, the world knows of the accident. Where are the official responses? What do you think the public affairs officials at Asiana knew at that point? Boeing, the manufacturer of the plane, issued a statement via Twitter at 1:20 p.m. – almost two hours after the first tweet of the accident. The National

Transportation Safety Board, the U.S. government's point agency for investigating the incident, held a press conference at 3 p.m. While that is amazingly quick by most standards, it's still three and a half hours after the accident. More worrisome – the statement from Asiana Airlines didn't come until 3:39 p.m. and the airline didn't issue a press release until 8:43 p.m. The airline was playing “catch up” and taking heat for its perceived inaction for many days.

There are less dramatic nuclear examples. A photo of a transformer fire at the Indian Point nuclear plant, taken from across the Hudson River, was on Twitter a mere five minutes after the plant had declared an Unusual Event, the lowest of four emergency action levels. I would note that this was well before the licensee was required to report this event to the NRC. According to regulations, the plant has up to an hour to notify the NRC.

Speed is a challenge, but so is accuracy. A fire in a machine room at the Flamanville nuclear plant in France, though serious, was twisted into a visual catastrophe by a photo on Twitter, supposedly of the plant surrounded by billowing clouds of smoke. The photo was of an explosion in China. ASN will provide you with all the trying details on a panel later in the workshop. We can complain and say it's not fair in that no one can be expected to deal with such accelerated communication time lines and the possibilities for such hoaxes. Well, go ahead and grumble among yourselves, but this is the world nuclear regulatory communicators must contend with. It is a particular challenge for us. Nuclear regulators are not known for their speed in reviewing data and agility in decision making. By our nature, our organizations are thoughtful, studious, even plodding. We take time to hear many points of view, study the research and fully reason out decisions.

But we don't have that luxury when the need for information in a radiological emergency is so pressing, so demanding and so impactful on the long-term credibility of our institutions. Further complicating our task are the obstacles reflected in Osmo Antero Wiio's “Laws of Human Communication.” A professor of economics at the University of Helsinki and a member of the Finnish parliament, Wiio is known for a rather pessimistic view of communication success. Among his laws is the sobering first law: “Communication usually fails except by accident.” And the fifth one – “In mass communication, the important thing is not how things are but how they seem to be.”

So what are we to do? The answer to that question, in large part, will come from the wonderful array of panelists bringing forth their experiences and lessons learned at this conference. I was very happy to see such topics as communicating risk, stakeholder engagement, rumor control, education of the public, and the importance of plain, non-technical language. All of these topics are vital pieces of the puzzle for how nuclear regulators can address the challenge of communicating during a radiological emergency.

There is no magical solution. Unfortunately, no one will not walk away from this week with “The Answer.” But we will leave with many ideas, different perspectives, some concerns no doubt, many new tools and a path toward integrating what has worked elsewhere into a plan that will work for your particular culture, society and stakeholder groups. If there is one thing I'd like to particularly underscore, it is how trust is the underpinning for all the topics you'll be discussing during the symposium. I've spoken about this before in other settings, in the United States and internationally. And I'd like to highlight it again today. To put it bluntly, none of the communication tools in the tool box work if you are not trusted.

Researchers have found – and I suggest we know this intuitively – that trust plays an important role in how we accept and respond to risk. If we don't trust the decision maker – or we don't know them well enough to place our trust in them – we are skeptical of their risk calculations and risk communication. Credibility is built on two pillars. It's built on expertise – that is, do you know what you're doing. And it's built on trustworthiness – can we believe what you're telling us. Being seen as credible and achieving trust can be very difficult for any nuclear regulator anywhere in the world which oversees a highly technical and complex industry that many people simply may not understand, especially when what we're regulating – radiation – cannot be seen or felt or heard. You must build trust in what I call “peacetime” in order to have it to draw on in “war time.” Your public must feel respected and communicated with and listened to during ordinary times in order for them to turn to you in extraordinary times.

So while you are focused on your crisis communication toolbox this week, also be mindful of the day-to-day, routine communication that is the foundation of your crisis response. As I said earlier, build your relationships now. Establish your technical expertise now. Become expert in your social media platforms now. Have relationships with the media now. Do not neglect your traditional communication methods – the news release remains relevant. And practice your plain language now – learn how to translate your complex, scientific decisions and actions into verbiage the average person understands. If you talk over people's heads, they will not trust you. Learn from every mistake, whether it occurs during an exercise or during a regular work situation or during a small crisis. Develop solid communication plans and then refine them, test them, review them, update them. Make sure they address multiple scenarios and the needs of various stakeholder groups. Do not forget your international colleagues may need information, too. And then, don't put those plans on a shelf to get dusty and rotten. They need to be living, breathing documents tested whenever possible. To the average lay person in every country around the world, radiation itself may be scary and a radiological emergency is terrifying. We must never forget that we are communicating to people with families and fears, homes, jobs, health concerns, financial concerns, ecological concerns and more. They need to know if they are safe and if not, how to get safe. We cannot underestimate the impact fear makes on decision making. While we develop our tools and create our plans, remember they are intended to help real people with real fear.

During the early, frantic days of the Fukushima Dai-ichi crisis, the NRC was contacted by a panicked family in Wyoming hiding in their basement afraid of radioactive fallout. Wyoming is a state in the American West 9000 miles (over 14000 kilometers) from Japan. That poor terrified family in the basement is a reminder that we must educate people about risk, put it in perspective, build their trust and communicate with them in a way they understand. We need to be a credible source of accurate, consistent information across a variety of platforms. The public and all our various stakeholders depend on us.

So, please, do not sit back and believe it will not happen to your organization. Because, sadly, inevitably, it will. In some form, in some way, we will all face a crisis. As you go through this week, perhaps you could consider these questions as you listen to panels:

- Can I apply this to my own crisis communication program?
- Can I integrate this into my day-to-day program?
- Can I modify what I'm already doing/planning in order to maximize its use in a crisis?
- Can I use this to further trust-building and relationship-building?

- Can I contribute to this international exchange of ideas?

I wish you well for the week. Thank you so much for your attention this morning. Before the floor opens for questions, let me leave you with this time worn but still relevant quote from former U.S. President and General Dwight D. Eisenhower: “Plans are worthless, but planning is everything.”